

Value of Time – A Citizen’s Perspective

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Without a doubt, the notion of a traveler’s Value of Time (VoT) is one of the most important and well-researched concepts in our research community. Despite this strong and ongoing scholarly interest, we feel that there is one crucial aspect of the VoT-metric which has been largely overlooked in the literature. This aspect relates to VoT-data collection, and more specifically the frame in which respondents to stated choice experiments are forced (see below for more detail). The contribution of this paper is threefold: first, we make this framing explicit and show how it is potentially at odds with information needs of policy makers. Second, building on theoretical arguments derived from the broader ethics- and policy-literature, we develop alternative frames that may be argued to be more in line with the use of VoT in transport policy evaluation. Third, through a series of novel choice experiments and model estimations, we explore to what extent and in what ways the obtained VoTs differ between frames.

To become specific, consider a conventional Stated Choice data collection effort aimed at inferring travelers’ VoT. The frame in which respondents to such an experiment are forced, hardly differs among the wide variety of choice experiments administered: the respondent faces a choice between different travel options (usually routes) with different time and costs. Her implicit trade-offs between time and costs are then taken to be her VoT which in turn is used as input for, say, a CBA concerning investments in a new road project. We believe that there are several aspects of this framing which deserve to be made explicit. For reasons of space limitations, we limit ourselves to a selection:

First, the respondent is being put in a position of a consumer, in the sense that she is supposed to trade off time gains with money spent from her own budget, after taxes. In contrast, the vast majority of policy decisions, excluding road pricing related policies, involve previously collected taxes. Several economic philosophers have argued that a consumer’s decision about how to spend her money are likely to be a poor proxy of how the same individual in her role as citizen, believes that the government should spend (her) tax moneyⁱ.

Taking this ‘citizen-perspective’ one step further, we consider it a non-trivial assumption that in conventional choice experiments used for VoT-elicitation, the respondent is left uninformed about the association with any transport policy and its scope. She is merely confronted with a simple route choice situation, whereas the evaluation of any transport policy for which the derived VoT serves as input is likely to impact hundreds of thousands of travelers, if not more; and to involve a very large monetary investment. It seems rather restrictive to a priori assume that a respondent’s trade-offs between time gains and costs are the same, irrespective of whether or not she is choosing between two routes for her personal travels, or between different transport policies whose costs and travel time gains may affect large numbers of travelers and citizens (including herself).

Through a very careful process, supported by a large body of theoretical work, we have designed seven different contexts or frames. Each frame is unique in terms of how it positions the respondent, before asking her to make a series of hypothetical choices. At this moment, a survey company is recruiting 700 respondents, each of which will be randomly assigned to one frame, in a way that minimizes differences in socio-demographic characteristics between respondents assigned to different frames. Note that we have taken care to ensure that differences between frames echo through in the introductory text preceding the choice experiment, keeping the choice sets themselves the same across all frames. This allows us to treat each frame as a context which may interact with the estimated VoTs. As a consequence, we will be able to statistically infer how an individual’s VoT differs between frames.

We believe that in case we find differences in VoT between different frames, and to the extent that these differences are substantial, this may have non-trivial consequences for the way in which future VoT-data collection efforts are designed.

Results of this choice experiment will be obtained during the next few weeks. The proposed presentation at the hEART symposium will be the first occasion where the estimated VoTs will be presented, interpreted, and discussed with the research community.

References

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ⁱ For example, Sagoff (1988) argues that the valuations of individuals as citizens are relevant, not those of individuals as consumers. This argument is echoed by economists and legal scholars such as

Robert Solow, Cass Sunstein and Stephan Marglin. More specifically, Sunstein (2005) argues that human beings are citizens, not merely consumers, and their consumption choices, as measured by willingness to pay, might be trumped by their reflective judgments as citizens. Solow (1981) states that there are situations in which the body politics' willingness to sacrifice may be badly measured by the sum of individuals' willingness to sacrifice in a completely 'private' context. Marglin (1963) mentioned an 'economic schizophrenia' of human beings, arguing that 'the economic man' and 'the citizen' are for all intents and purposes two different individuals.